

C-5.3 Apply the gas laws to problems concerning changes in pressure, volume, or temperature (including Charles's law, Boyle's law, and the combined gas law).

**Revised Taxonomy Level    3.2 C<sub>A</sub>   Apply procedural knowledge**

**This concept was not addressed in physical science**

**It is essential for students to**

- ❖ Explain Charles' law and Boyle's laws in terms of the kinetic molecular theory
- ❖ Solve gas law problems concerning changes in gas pressure, volume, or temperature.

**Assessment**

The revised taxonomy verb for this indicator is implement (apply) the major focus of assessment will be for students to show that they can “apply a procedure to an unfamiliar task”. The knowledge dimension of the indicator, procedural knowledge means “knowledge of subject-specific techniques and methods” In this case the procedure for solving gas law problems using Charles' and Boyle's laws. A key part of the assessment will be for students to show that they can apply the knowledge to a new situation, not just repeat problems which are familiar. This requires that students have a conceptual understanding of gasses in terms of the Kinetic Molecular Theory.